

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 05-182906

(43)Date of publication of application : 23.07.1993

(51)Int.Cl. H01L 21/20
C30B 23/08
C30B 29/42
H01L 21/203

(21)Application number : 03-346646

(71)Applicant : SUMITOMO ELECTRIC IND LTD

(22)Date of filing : 27.12.1991

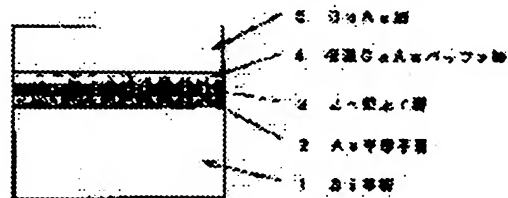
(72)Inventor : NAKAJIMA HISAO
HASEGAWA SHIGEHICO
MAHASHI KENZO
KOUKADO KOUICHI
KIMURA HIROYA
SHIMAZU MITSURU
SHIRAKAWA FUTATSU

(54) HETERO EPITAXIALLY GROWING METHOD

(57)Abstract:

PURPOSE: To obtain a GaAs epitaxial layer having a low dislocation and high quality by growing a group II element single atomic layer on an As single atomic layer, growing a low temperature GaAs buffer layer thereon and epitaxially growing a GaAs layer on the buffer layer.

CONSTITUTION: An Si (100) board 1 is heated to 250° C, and an As single atomic layer 2 is formed thereon. Then, a single atomic layer 3 of group II element such as Zn, Be, Mg, etc., is formed thereon. Thereafter, while a growing temperature remains at 250° C, a low temperature GaAs buffer layer 4 is grown on the layer 3. Then, the growing temperature is raised to 550° C, and a GaAs epitaxial layer 5 is grown. Thus, a two-dimensional grown can be controlled in an initial step of the GaAs epitaxial growth on the board.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]